

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Nationwide Number Portability)	WC Docket No. 17-244
)	
Numbering Policies for Modern Communications)	WC Docket No. 13-97

COMMENTS OF TELNYX LLC

June 7, 2019

Telnyx LLC (“Telnyx”) respectfully files these comments to the attention of the Commission’s Secretary, Office of the Secretary, Federal Communications Commission (the “Commission”), in response to the North American Numbering Council’s (“NANC”) Letter and Additional Findings Report Regarding Proposals to Implement Nationwide Number Portability (“NNP”) from Hon. Travis Kavulla, Chair, North American Numbering Council, to Kriss Anne Monteith, Chief, FCC Wireline competition Bureau (collectively, the “Report”). Telnyx appreciates the opportunity to have participated in both the NANC’s NNP Committee and Technical Subcommittee, which has involved needed discussion on viable NNP solutions.

Telnyx supports implementing NNP via the use of Internet Protocol (“IP”) Local Routing Numbers (“LRNs”), or “IPLRNs”, rather than via the use of National Local Routing Numbers (“NLRNs”). As further detailed in these comments, the IPLRN approach is compatible with the public switched telephone network (“PSTN”), and, unlike the NLRN approach, also promotes the IP transition, drives further competition and does not unduly burden legacy service providers who have not yet invested in IP-capable switches.

The Report details two possible solutions to the NNP problem¹, the first being NLRN. NLRN, like IPLRN, is compatible with the current PSTN infrastructure and allows existing LRNs to be implemented into any Number Portability Administration Center (NPAC) region, thus permitting numbers to be ported to any LRN in any LATA (local access and transport area).² However, one of the most prominent concerns regarding NLRN is its technical feasibility to widely implement. It's unlikely that non-IP-capable switches (still used primarily or exclusively by many legacy service providers) would be able to house the thousands of LRNs that would be required to in order deploy nationally (as opposed to only those LRNs within a given local market as currently required) without expensive improvements to the legacy network infrastructure (an economic double-down away from IP transition).³ Accordingly, it is anticipable that those legacy service providers who have not yet invested in IP-capable switches will claim the approach is unduly burdensome, which will in turn leave the industry without any NNP solution. In addition, NLRN's continued use of geographically reliant routing would require all service providers to implement additional checks to properly rate and bill calls as local vs. long distance, intrastate vs. interstate, which would likely raise rates to consumers overall.⁴

IPLRN presents the unique opportunity to implement NNP while also achieving other FCC goals. The guiding principle of IPLRN is to route every call to an IP network as quickly as possible, if it

¹ See *generally* the Report.

² See the Report at page 6 ("[The NLRN] model supports national number portability using existing LRNs. This approach allows TNs to be ported beyond the current LATA boundaries, thereby allowing TNs to be made available to customers in any geographic location across the nation.").

³ By way of example, Local Exchange Routing Guide (LERG) 12 contains 51,575 LRNs.

⁴ See, e.g., the Report at page 6 (E.g., "[NLRN] has the disadvantage that it could lead to access stimulation or traffic pumping if service providers associate ported TNs with LRNs that are commercially advantageous but not geographically appropriate to the customer's physical location or primary place of use.").

is not already originated on an IP network, which in turn limits the time it spends on oftentimes expensive and inefficient geographically-reliant routing systems, which should improve long-distance rates for consumers. IPLRN is also compatible with the PSTN.⁵ Because IPLRN solely operates on the IP network, the solution requires no changes to the PSTN infrastructure, allowing service providers to transition to IP and implement NNP as they see economically and technically feasible.

IPLRNs are made possible simply by the implementation of designated non-geographic area codes, which will allow for simpler routing. In instances where an originating provider has not yet invested in IP-capable switches, such provider will nevertheless be able to see the terminating NNP area code, allowing the passage of the call quickly to a third party NNP provider with the ability to convert the call from time-division multiplexing (“TDM”) to session initiation protocol (“SIP”) such that the call is able to properly terminate. It will be minimally burdensome to such legacy providers without IP network capability to implement (in contrast to NLRN), as the legacy switches will only be required to field a small number⁶ of additional non-geographic area code (and not the thousands of additional LRNs required by NLRN). In addition, as more calls traverse the IP network, call failures due to PSTN translations, trunking or interconnection issues would be increasingly less common, providing better service quality to all subscribers.

It is evident in many industry discussions that legacy networks aim to slow the IP transition, as they continue to profit from TDM investments from years prior. With reduced industry reliance on the legacy network, service providers will experience increased competition and will be

⁵ See *generally* the Report at page 6.

⁶ See the Report at page 6 (“The IPLRN solution has two main elements: One or more new nongeographic area codes ...”).

commercially motivated to make the needed changes to implement NNP. This will generally hasten the IP transition, and further the adoption of STIR/SHAKEN.

The US has been in this state of transition for over 20 years and is beginning to fall behind as countries, such as the UK⁷ and Argentina⁸, begin to mandate the decommissioning of TDM. We urge the Commission to consider IPLRN as the preferred solution to NNP, given the many benefits which promote continued network advancement and competition within the industry.

Thank you for your continued efforts.

Sincerely,

Telnyx LLC

/s/ David Casem, CEO

⁷ See generally Ofcom's "Future of interconnection and call termination, First Consultation", published 11 April 2019 https://www.ofcom.org.uk/__data/assets/pdf_file/0020/144344/first-consultation-future-interconnection-termination.pdf.

⁸ On 13 May 2019, the Argentinian Government approved the "Plan Fundamental de Señalización Nacional (National Signaling Plan or PFSN)" which defines only two officially supported protocols for interconnection: SIP and BICC. Any other protocol in use will be required to migrate to an officially supported protocol within two years. See https://www.enacom.gob.ar/multimedia/normativas/2019/res8STIYC_19.pdf.